

IMMUNIZATIONS IN WOMEN 2014

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Myths Vs Facts

- See “Talking Point” document in your packet

Vaccines does not cause the disease

- Vaccines contain either dead or live proteins called antigens.
- Live attenuated vaccines have living microbes that are weakened
 - could make someone sick and should not be given to people with certain conditions.
 - include live influenza, measles, mumps, and rubella.
- Inactivated or “dead” vaccines cannot make you sick.
- If someone is exposed to the infection before the vaccine has triggered an immune response, the person could come down with the illness after being vaccinated.

Vaccines do not cause Autism

- The science does not support a link between vaccines and any developmental delays, including autism. The March of Dimes, AAP, Institute of Medicine, FDA, CDC, NIH and World Health Organization all confirm the safety of vaccines.
- The original article reporting a link between the measles, mumps and rubella (MMR) vaccine and autism was fraudulent, and the author later lost his medical license.

Vaccines are very safe.

- Each vaccine is tested rigorously in clinical trials before it can be approved by the Food and Drug Administration. Once it is approved for use in humans, the research is reviewed by the Advisory Committee on Immunization Practices (ACIP), a group of experts who advise the CDC on immunizations.
 - This group spends months or years reviewing the data before making recommendations

Vaccine side effects are usually mild and temporary.

- Most side effects are mild or moderate, meaning they do not affect daily activities.
- Severe side effects are extremely rare and are less severe than the complications from getting the disease.

The main side effects of being vaccinated are:

- Soreness at the site of injection
- Headache and upper respiratory infection
- Fever, joint pain, sore throat
- Nausea, vomiting, diarrhea; more common in childhood vaccines

Vaccines severe reactions are rare

- Any severe adverse reaction should be reported to the Vaccine Adverse Event Report System (VAERS) at www.vaers.hhs.gov/ or by calling 1-800-822-7967.
- These reactions are monitored and reviewed regularly by the CDC Immunization Safety Office and the ACIP.
- www.cdc.gov/vaccines/vac-gen/side-effects.htm

Vaccines and Mercury

- Many medications and vaccines contain preservatives to prolong shelf life.
- All vaccines recommended for pregnant women are available without mercury.
- Thimerosal, a mercury-based preservative,
 - was removed from childhood vaccines in 2001.
 - still used in the multi-dose vial of the adult influenza vaccine.
 - None of the whooping cough vaccines (Tdap and DTaP) currently used in the United States contain thimerosal.

Mercury

- Researchers have conducted extensive research and have found no link between the mercury previously used in vaccines and the risk of side effects, especially in pregnant women.

- CDC. Recommended Adult Immunization Schedule — United States, 2014. Morbidity and Mortality Weekly Report Vol. 61 / No. 4, February 3, 2014

ACIP: Guidance for Vaccine Recommendations in Pregnant and Breastfeeding Women

- General Recommendations for use
- Specific Travel vaccine information
- <http://www.cdc.gov/vaccines/pubs/preg-guide.htm>

Vaccines in Pregnancy

- Yes
 - Influenza: Inactivated-Dead virus recommended each year
 - Pertussis: Tdap in each pregnancy 27-36 weeks
- Maybe
 - Hepatitis A, Hepatitis B
- No
 - HPV, MMR, Live influenza virus, Varicella

Recommendation for Routine Vaccine Use in Pregnant Women

- Influenza
 - AAFP, AAP, ACNM, ACOG, AMA, ANA, AOA, APhA, AWHONN, March of Dimes, and CDC urge vaccinating pregnant and postpartum patients against seasonal influenza.
- Tdap
 - ACOG & ACNM

Influenza

- virus that causes influenza is transmitted through aerosols, large droplets, or direct contact with secretions
- drier the air, the longer the viral particles live
- The contagious period lasts from 1 to 2 days before and to up to 5 days after symptoms begin.
- Viral particles can live on non-porous surfaces, such as doorknobs and telephones, for up to 24 hours, and on paper surfaces, such as tissues, cloth, or paper, for up to 15 minutes.

Influenza and pregnancy

- Pregnant women who acquire the flu are 4x more likely to develop complications
- Fetuses exposed to flu-like illnesses are increased risk for
 - Congenital malformations, miscarriage and stillbirth
 - altered brain development including Parkinson's, schizophrenia

Influenza Vaccine

- Vaccine is produced based on estimates of next year's outbreak
- Vaccine efficacy depends on
 - the age and immunocompetence of the person receiving the vaccine
 - The accuracy of the vaccine
 - Timing of administration

Immunogenicity

- It takes a few weeks for the vaccine to produce antibodies
 - The person is not protected for a few weeks after the vaccine
 - A person can be exposed to the virus near the time of vaccination and still come down with the disease.

- Studies have demonstrated the inactivated influenza vaccine to be safe in pregnancy, with no increased risk of maternal complications or adverse fetal outcomes.
- The benefit far outweighs the risk in protecting the fetus and newborn

Rasmussen, Seminars in Fet & Neo Med, 19(3) 2014, p161-169

Tamma, Am J of Ob and Gyn. 201 (6), 2009, 547–552

Steinhoff, N Engl J Med 2010; 362:1644-1646A

Naleway et al. Epidemiol Rev 2006;28:47–53.

Yeager et al.. Am J Perinatol 1999;16:283– 6.

Pertussis (“whooping cough”)

- **Pertussis is still on the rise worldwide**
- **Pertussis is a highly contagious bacterial disease**

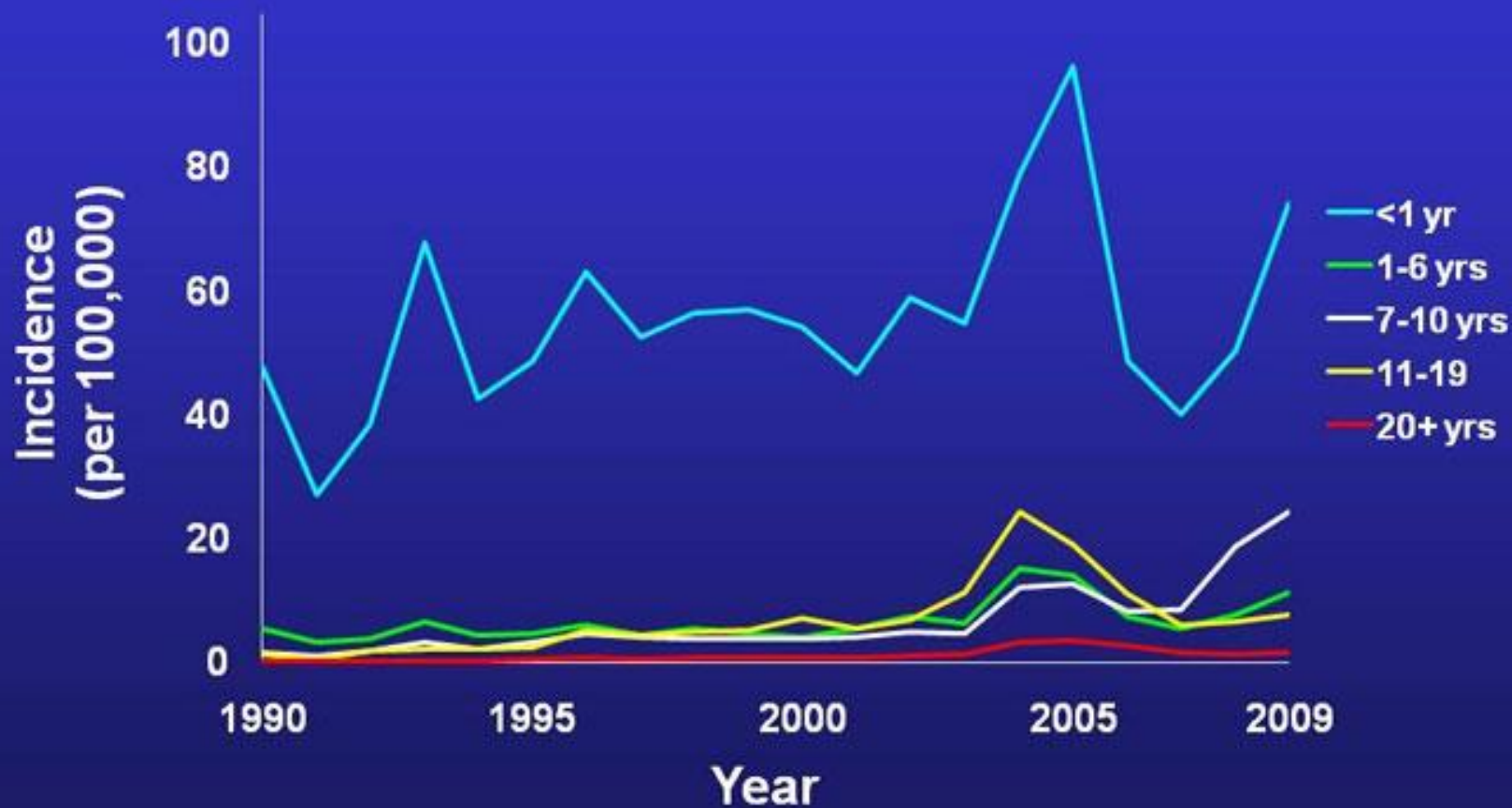
Pertussis

- Coughing fits due to pertussis infection usually last from 1 to 6 weeks, but can go on for up to 10 weeks or more.
- Pertussis can cause serious illness in children and adults
- Newborns and infants are especially hard hit by this disease.
 - Infants less than 12 months are at highest risk for severe disease and death.

Cases of Pertussis in US: Week of August 9, 2014

- August 30 week 203
- Previous 52 weeks average 750/week
- Cumulative this year 16,760
- 2013: 25,000 (final number to be released soon)
- 2012: 48,277
 - including 20 pertussis-related deaths, mostly in infants <3mo
- 2010: 20,550

Reported pertussis incidence by age group 1990-2009



SOURCE: CDC, National Notifiable Diseases Surveillance System, 2009

Dtap vs Tdap

- Infants begin their pertussis immunization series (Diphtheria-Tetanus-Acellular Pertussis or “DTaP”) at two months,
 - maximum protection is not achieved until the primary series is completed.
- Adolescents and adults are recommended to be immunized with a booster dose - “Tdap” ANYTIME
 - Approved for those over age 65
 - In June 2009, CDC eliminated the minimum interval

CDC 2008 Recommendation for Tdap Vaccination in Post-Partum Period

- For women who have not received Tdap previously (including women who are breastfeeding), Tdap is recommended as soon as feasible in the immediate postpartum period to protect the women from pertussis and reduce the risk for exposing their infants to pertussis.
- The postpartum Tdap should be administered before discharge from the hospital or birthing center.
- If Tdap cannot be administered at or before discharge, the dose should be administered as soon as feasible thereafter.
- Elevated levels of pertussis antibodies in the mother are likely within 1--2 weeks after vaccination.

Definition of “Cocooning”

“Immunization of family members & close contacts of the newborn”

Pertussis in infants

- **Family members/care providers are the main source of pertussis to infants**
- 75%-83% of infant pertussis cases were caused by an infected household member.
- Parents and siblings are the most common source,
 - 55% of cases in infants linked to an infected parent.

Bisgard KM, et al. *Pediatr Infect Dis J* 2004; 23(11):985–989.

Wendelboe AM, et al *Pediatr Infect Dis J* 2007; 26(4):293–299.

Healthy People 2010 objective

- Counties that reached the goal of 90% vaccination coverage
 - 94% for hepatitis B vaccine,
 - 93 % for polio vaccine,
 - 86% for MMR vaccine,
 - 71% Hib vaccine,
 - 50 percent for varicella vaccine,
 - **8 % for DTaP/DTP vaccines,**

County-Level Trends in Vaccination Coverage Among Children Aged 19-35 Months--United States, 1995-2008"

MMWR Surveillance Summaries (04/29/11) Vol. 60, No. 4, P. 1

Tdap

- 2005 vaccine approved for adults
- 2006, the Advisory Committee on Immunization Practices recommended Tdap vaccination of
 - All health care workers
 - All caregivers of infants aged <1 year (“cocooning”) to prevent pertussis related complications and deaths.

Tdap in every pregnancy

- October 2012, ACIP recommended a dose of Tdap during ***each pregnancy***, irrespective of the patient's prior history of receiving Tdap
- <http://www.cdc.gov/vaccines/vpd-vac/pertussis/tdap-pregnancy-hcp.htm>

Tdap

- preferably during the third trimester
 - 27-35 weeks
- “Providers are encouraged to report administration of Tdap to a pregnant woman, regardless of trimester, to the appropriate manufacturer’s pregnancy registry”:
 - Adacel® to sanofi pasteur, telephone 1-800-822-2463
 - Boostrix® to GlaxoSmithKline Biologicals, telephone 1-888-825-5249”

GA House Bill 249

- Requires all new post partum women receive information on pertussis disease and the availability of a vaccine to protect against such disease
- Effective 07-01-2011

Vaccine in pregnancy benefit outweighs the risk

- Hepatitis A
 - “The safety of hepatitis A vaccination during pregnancy has not been determined; however, because hepatitis A vaccine is produced from inactivated [hepatitis A virus], the theoretical risk to the developing fetus is expected to be low. **The risk associated with vaccination should be weighed against the risk for hepatitis A in pregnant women who may be at high risk for exposure to hepatitis A virus.** ”

Vaccines recommended in some circumstances

- Hepatitis B
 - **Pregnancy is not a contraindication to vaccination.**
- **“Pregnant women who are identified as being at risk for HBV infection during pregnancy (e.g., having more than one sex partner during the previous 6 months, been evaluated or treated for an STD, recent or current injection drug use, or having had an HBsAg-positive sex partner) should be vaccinated.”**

Vaccines recommended in some circumstances

- Polio - inactivated
 - “Although no adverse effects of IPV have been documented among pregnant women or their fetuses, **vaccination of pregnant women should be avoided on theoretical grounds.** However, if a pregnant woman is at increased risk for infection and requires immediate protection against polio, IPV can be administered in accordance with the recommended schedules for adults.”

Vaccines with inadequate data in pregnancy

- Meningococcal MCV4
- Pneumococcal Conjugate PCV4, 7 or 13
 - For children
- Pneumococcal Polysaccharide PPSV23
 - All adults 65 years of age and older.
 - Anyone 2 - 64 who has certain medical problems

Vaccines *contraindicated* in pregnant women

- HPV
- Live influenza (nasal)
- MMR
- Varicella
- Zoster

Pneumococcal Vaccination

- The Joint Commission, the Hospitals Quality Alliance (HQA) and the Centers for Medicare and Medicaid Services (CMS), recommends pneumococcal vaccination for persons at high risk for developing pneumonia.

Adult triage for PPSV vaccine

- Anyone 2 - 64 who has
 - a long-term health problem
 - heart disease, lung disease, sickle cell disease, diabetes, alcoholism, cirrhosis, leaks of cerebrospinal fluid or cochlear implant.
 - Immunosuppressed
 - Hodgkin's disease; lymphoma or leukemia; kidney failure; multiple myeloma; nephrotic syndrome; HIV infection or AIDS; damaged spleen, or no spleen; organ transplant.
 - long-term steroids, certain cancer drugs, radiation therapy.
 - ***smoker or has asthma***

- Each woman who is vaccinated should receive the Vaccine Information Sheet approved by the CDC. These information sheets can be downloaded from either www.immunize.org/vis/ or www.cdc.gov/vaccines/hcp/vis/current-vis.html

Post Partum Vaccines

- All Adult recommended vaccines, except live virus (at risk of transmitting to newborn)
- CDC and CMS recommend every hospital have standing orders to deliver influenza and pneumococcal vaccinations as recommended by ACIP and the Task Force on Community Preventive Services.

SHARE

- **SHARE the tailored reasons** why the recommended vaccine is right for the patient given their age & health status,
- **HIGHLIGHT positive experiences** with vaccines (personal or in your practice), as appropriate, to reinforce the benefits and strengthen confidence in vaccination.
- **ADDRESS patient questions** and any concerns about the vaccine, including side effects, safety, and vaccine effectiveness in plain and understandable language.

Practice Standards for All Healthcare Professionals

1. Assess
2. Strongly recommend
3. Administer or refer
4. Document

<http://www.cdc.gov/vaccines/hcp/patient-ed/adults/for-practice/standards/index.html>

ASSESS immunization status of all your patients at every clinical encounter

- Stay informed. Get the latest CDC recommendations for immunization of adults.
- Implement protocols and policies. Ensure that patients' vaccine needs are routinely reviewed and patients get reminders about vaccines they need.

Strongly RECOMMEND vaccines that patients need

- Share tailored reasons why vaccination is right for the patient.
- Highlight positive experiences with vaccination.
- Address patient questions and concerns.
- Remind patients that vaccines protect them and their loved ones against a number of common and serious diseases.
- Explain the potential costs of getting sick.

ADMINISTER needed vaccines
or **REFER** your patients to a
vaccination provider.

- Offer the vaccines you stock.
- Refer patients to providers in the area that offer vaccines that you don't stock.

DOCUMENT vaccines received by your patients.

- Participate in your state's immunization registry. Help your office, your patients, and your patients' other providers know which vaccines your patients have had.
- Follow up. Confirm that patients received recommended vaccines that you referred them to get from other immunization providers.